Amendments to the Claims

1. (withdrawn) A method for heat treating a cast, homogenized and subsequently cooled metallic extrusion billet or - when hot shears are used - rod portion, preferably made of a light metal alloy, immediately before it is fed into the extruder,

a) wherein the extrusion billet/rod portion (1) is reheated,

b) the reheated extrusion billet/rod portion (1) is subsequently cooled, and

c) is delivered to the extrusion device, characterized in that

d) the extrusion billet/rod portion (1), based on a diameter of 200mm, is reheated to the desired temperature in 20 minutes at most, and in that

e) the reheated extrusion billet/rod portion (1) is exposed to passive temperature equalization for 3 minutes at most,

f) said temperature equalization resulting in a temperature uniformity, based on a diameter of 200mm, of less than ±10K.

2. (withdrawn) A method for heat treating a cast, homogenized and subsequently cooled metallic extrusion billet or - when hot shears are used - rod portion, preferably made of a light metal alloy, before it is fed into the extruder,

a) wherein the extrusion billet/rod portion (1) is reheated,

b) the reheated extrusion billet/rod portion (1) is subsequently cooled, and

c) is delivered to the extrusion device, in particular as set forth in claim 1, characterized in that

d) the reheated extrusion billet/rod portion (1) is exposed to rapid cooling using water spray nozzles (25), such that - based on a diameter of 200mm - a temperature at least 150K below the extrusion temperature is set on the surface of the extrusion billet/rod portion (1) within a nozzle spraying period of 30 seconds at most, and in that

e) the desired temperature distribution is set in the extrusion billet/rod portion (1), both over its cross-section and along its length, by the end of a

temperature equalization period which is longer than the nozzle spraying period.

3. (withdrawn) The method for heat treating an extrusion bolt/slug (1) as set forth in claim 1, characterized in that the extrusion bolt/slug (1) is heated to the highest optimal temperature for the respective alloy, and at an extrusion temperature which is lower than this temperature due to the requirements of the extrusion process is rapidly cooled following said heating, wherein the extrusion bolt/slug (1) is cooled such that after an active cooling period and a following temperature equalization period it exhibits the desired, lower extrusion temperature, in particular when a so-called temperature taper is generated while cooling from the highest optimal temperature for the respective alloy to the lower extrusion temperature required for the extrusion process.

4. (withdrawn) A method for heat treating an extrusion billet/rod portion, characterized in that the extrusion billet/rod portion is heated in a first part (7) by gas burner flames which contact the surface, and in a second part (8) by forced convection by means of hot gas nozzle jets blown onto the surface of the material, and in that the last sub-section (8b) of heating by forced convection substantially serves to equalize the temperature in the material and is operated with only a low excess temperature as compared to the end temperature.

5. (withdrawn) A method for heat treating an extrusion billet/rod portion, characterized in that - directly following a preceding rapid heating - rapid cooling is anticipated using individual water spray nozzles (25) whose axes are radially directed towards the horizontal axis of the material and which may be operated, individually or in groups, at different pressures and/or with different activation times.

6. (withdrawn) The method as set forth in claim 1, characterized in that demineralized water is used as the cooling fluid.

7-16. (cancelled)

17. (new) A device for heat treating a cast, homogenized metallic extrusion block immediately before it is fed into an extruder, comprising

a heating device configured to heat the block to an elevated temperature; and

a cooling device configured to receive the heated extrusion block in a horizontal orientation in a spraying area having a horizontal axis, the cooling device including cooling fluid spray nozzles for rapidly cooling the heated extrusion block, the spray nozzles surrounding the spraying area, and the nozzles having axes directed radially inwardly in relation to the horizontal axis of the spraying area.

18. (new) A device as set forth in claim 17, wherein the cooling device is configured such that at least some of the nozzles operate at different pressures and/or for different activation times than other nozzles.

19. (new) A device as set forth in claim 18, wherein the nozzles can be operated individually or in groups at different pressures and/or for different activation times.

20. (new) A device as set forth in claim 17, including a transport configured to transport the cooled block from the cooling device to an extruder for a period of time during permitting temperature equalization of the cooled block.

21. (new) A device as set forth in claim 20, wherein the cooling device and transport device is configured to spray the block for a spraying period of time, and the transport is configured to transport the block for a temperature equalization period of time, the temperature equalization period is longer than the nozzle spraying period.

22. (new) A device as set forth in claim 20, wherein the spraying period is not greater than 30 seconds

23. (new) A device as set forth in claim 17, wherein the heating device includes recuperation burners in which a recuperator for preheating the combustion air is individually integrated into each burner respectively.

24. (new) A device as set forth in claim 23, wherein the recuperation burners include that are fitted with dies made of a material with high temperature stability, to alter the cross-section of the burner jets.

25. (new) A device as set forth in claim 17, wherein nozzles are disposed in annular arrangements.

26. (new) A device as set forth in claim 17, including a block holder configured to hold the block stationary in the spraying area as the block is cooled by spray from the nozzles.

27. (new) A device as set forth in claim 26, wherein the holder includes a clamp configured to grip facing sides of the block and which can be set to various bolt lengths.

28. (new) A device as set forth in claim 27, wherein the clamp is movable horizontally between the spaying area and a block loading/unloading position.

29. (new) A device as set forth in claim 17, further comprising a second cooling device, and the cooling devices are configured to operate in parallel.

30. (new) A device as set forth in claim 17, wherein a pressure accumulator is connected to the nozzles for the supply of cooling fluid thereto.